

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended): A hydrogen storage and/or transportation container comprising a hydrogen storage alloy material, comprising:

wherein said hydrogen storage alloy material has a structure where ultrafine particles of Pd, M (M is at least one metal selected from the group consisting of Pt, Au, Fe, Co and Ni) and one or more compounds thereof are precipitated and dispersed in a parent phase of ZrO_2 ,

wherein said hydrogen storage alloy material is prepared by subjecting an amorphous Zr alloy used as a precursor to a heat treatment in air or an oxygen atmosphere so as to form the structure,

wherein the Zr alloy has a composition, in atomic %, expressed by the following formula:

$Zr_{100-a-b}Pd_aNi_b$ $Zr_{100-a-b}Pd_aM_b$ (wherein $15 \leq a \leq 40$, $2 < b \leq 10$, and M is at

least one metal selected from the group consisting of Pt, Au, Fe, Co and Ni), wherein said hydrogen storage alloy material has a structure where said Pd, said Ni and one or more compounds thereof are dispersed in a parent phase of ZrO_2 in the form of ultrafine particles, and wherein said hydrogen storage alloy material being prepared by subjecting an amorphous alloy to a heat treatment in air or an oxygen atmosphere.

2. (Original): The hydrogen storage alloy material as defined in claim 1, which exhibits a hydrogen storage amount of 2.5 weight % or more in a weight ratio relative to Pd contained in said hydrogen storage alloy material.

3. (Cancelled).

4. (Currently Amended): A method for producing the hydrogen storage alloy material as defined in claim 1, comprising:

preparing a melt of a master Zr alloy formed through a melting process;

rapidly solidifying said melt at a cooling rate of 10^4 K/s or more to form said amorphous Zr alloy; and

subjecting said amorphous Zr alloy to an oxidizing heat treatment in air or an oxygen atmosphere at 250 to 350°C to selectively oxidize said alloy element Zr so as to allow ultrafine particles of said Pd, said Ni and one or more compounds thereof to be precipitated and dispersed in a parent phase of ZrO_2 ~~in the form of nanoparticle-size ultrafine particles.~~